# Measuring Range of Motion

## Edited Video Transcript

All right. You did your screening, and you discovered that your client has a potential range of motion deficit. Our first step is to measure. We want to measure so [that] we can, you know, establish [that] it's a problem, establish [that] it's a deficit, get a baseline so we know if we can improve it over time and be able to like really get an idea of what to do next.

So measuring: we use goniometers on angle measurements. Uh, really similar, you know, to your ankle measurement used in the shop or in like high school geometry class. Okay, we'll start with our classic, you know, big-circle-small-circle. We'll, you know, play around with other ones.

First, when we're looking at a goniometer, think about the size of your joint you're measuring. [It]should roughly correspond to the size of the goniometer you're using. So, this great big one is great for hips, you know, great for legs, pretty good for shoulders, but it gets kind of awkward if you're dealing with something smaller. Uh, one of the like this…size, you know, it's actually much better when you're getting down into the elbow and the wrist. Thank you. There's other styles. There's like the small half-moon goniometers, so again, that being smaller does help measuring smaller joints getting down into the forearm, the wrist, the fingers.

Another great tool are your little metal half-angle goniometers. These are stellar for measuring range of motion of our fingers, and I'll show you how to use these, you know, as we get into some of these special range of motion measurements.

All right, so our procedure as we talked about yesterday, after you've screened them, we're going to measure. First step of all measurement is explaining because we're always going to explain what we do to our clients, because that's just good. Then, second, you're going to position your client. Two factors: one, you want them to be safe; you want them to be comfortable. Two: you want that joint as much as possible to be in an anatomical position for most of the time. So again, our anatomical position, you know, standing arms at the side, hand supinated, fingers extended. Uh, that said, that's not always possible with every client every time, so you can kind of think about that body segment. So, if for example you're measuring the elbow, and the person is in seated, having them just extend their arm, yeah, it's, this is, “My shoulder's not in antenna position but my elbow is,” and since we're measuring the elbow, that's okay.

So, from there, your next step let's say with our skeleton, we're going to measure our shoulder range of motion. You're going to palpate and find that joint center just like we're talking in functional anatomy. First, we feel. We find that joint center because that is going to line up with our axis of our goniometer. So, I'm going to find my axis of my goniometer, and I’m going to place it right over my joint center, and then I'm going to line my zero up on my goniometer to anatomical position. So, if we look at my goniometer real close, this line coming down here is lining up with zero. I'm going to have my client move their arm. I'm going to keep my goniometer lined up with the axis, my stationary arm lined up with anatomical position, and I'm going to move my movable arm so I can follow this around. And see that I'm right at…, so again, you explain what you're doing with your client. Position them in a safe position. Position them in something similar to anatomical position. Palpate your joint. Line your axis up over your joint zero, lining up with anatomical position zero. Lining up with anatomical position have them move their arm and then go around. Stationary arm lines up with it, with anatomical position, the movable arm, to where the joint is or to where the body is. So at that…, it would be right around 30 degrees for that time, okay?

To demonstrate on a person versus our skeleton—maybe a scooch out—I'll show both sides. So, let's say should I do shoulder again? I should do a different joint. Choice is different joint, okay? Let's say elbow. So, with my elbow, all right, I'll show both sides, okay? So. we're going to position here again, not necessarily an anatomical position at the shoulder, but anatomical position at the elbow. So, I'm going to line this up with anatomical position, palpate my joint, place my axis over my joint. There's my zero with anatomical position. Raise the other arm, same thing here: there's my zero at anatomical position. I'm actually going [to] flip it over there, okay? There's my zero to anatomical position. So, then she's going to bend her elbow as much as she can to make certain I'm still over my joint. I’m going to make certain this is still lined up with her body with her anatomical position. Now, I’m going to move my movable arm around, line it up degrees, and notice that looks about right. Going from here… all the way around, it's more than 90, less than 180, about 130 degrees.

To show you on this side, again, I'm here…. Got my joint center, palpating, lining up; my axis is going right through. Have her bend, come around my zero. I'm tracking where that line goes. Make certain I'm still on her joint center. Make sure I'm still lined up, and I've got, okay, the same process across 90 percent of our joints.

Explain palpate? To find the joint.

Line your axis up with the joint, line your stationary arm up with anatomical position, figure out where that zero is, and then track it around. Make sense?

Okay, I want you to try this with your partner. I’ve given you a bunch of joint range of motions. Let's start with elbow flexion, like I just measured.